

ACUPUNCTURE: SURGICAL ASPECTS*

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THAT acupuncture might be an effective new resource in the treatment of intractable pain is what the widespread enthusiastic press reports regarding Chinese medicine wishfully imply. Chronic pain which does not respond to customary treatment has always been a perplexing challenge to practitioners of the healing arts. In the study of this enigma, the multifaceted correlates of pain and its origin, distribution, modification, and treatment are constantly being investigated. Anesthesiologists, because of familiarity with anodyne drugs that alter consciousness and because of their expertness with techniques of regional anesthesia, have been studying and treating intractable pain for many years. They have been prime movers in the development of multidisciplinary pain-therapy centers. Our team at Maimonides Medical Center consists of anesthesiologists, internists, neurologists, psychologists, psychiatrists, physiatrists, neurosurgeons, oral surgeons, and others. Various modalities, such as regional nerve blocks, intravenous therapy, iontophoresis, physical medicine, and hypnotism have been applied. Since the search for methods to broaden the attack on pain never ceases, the enthusiastic news about acupuncture aroused our curiosity. We were eager to incorporate acupuncture into our armamentarium and we decided to study it.

Although acupuncture has been used in China for many centuries, it was not applied as an anesthetic in surgery until 1958, when Chinese acupuncturists successfully developed techniques for analgesia during tonsillectomy and dental extraction. They thus were encouraged to

*Presented as part of a *Symposium on Acupuncture* held by the Section on Medicine of the New York Academy of Medicine October 22, 1974.

search for meridian points to be used in various other surgical operations. Since that time there has been much publicity regarding the use of acupuncture in cardiac, pulmonary, and other operations. By 1973 more than 400,000 operations had been performed under acupuncture in every part of China. *Acupuncture Anesthesia* (Chen Chu Ma Chueh) was published in 1973 in China and dealt with theory, practice, meridian points, and procedure for various operations.¹

This presentation will describe our experience in surgery and in the Pain Therapy Center.

METHODS

Surgery. To investigate acupuncture for surgery, a simple clear-cut protocol was developed, which involved a relatively superficial surgical procedure, inguinal hernioplasty in males. The same experienced surgeon performed all the operations and the same anesthesiologists applied the acupuncture. The keeping of records, monitoring, and evaluation were conducted by our usual procedures. A complete medical study was done on all patients. In a few cases consultants contributed to the preanesthetic study.

Pain. The Pain Therapy Center accepts patients who have intractable pain when they have been referred by a physician and a clinical abstract has been submitted. Other patients are screened for admission by an internist-neurologist. If necessary, patients are sent to the comprehensive medical or other cooperating groups. Each patient is studied fully in the Pain Therapy Center; the diagnosis is corroborated and a plan of treatment is outlined. No drugs are prescribed for patients who are on acupuncture schedules.

Equipment. Fine stainless steel No. 30-32 gauge needles were used; their length varied from 1 to 15 cm. Needles were prepared by the methods used for ordinary hollow needles. After use they were soaked in sterilizing solution, cleansed, put in packs, and sterilized in an autoclave. A separate package was used for each patient. A DZ-62 electrical stimulator made in China was used as needed.

ACUPUNCTURE ANESTHESIA IN HERNIORRHAPHY (Figure 1)

Choice of loci was based on traditional Chinese physiology and concepts of energy circulation. The loci used were:

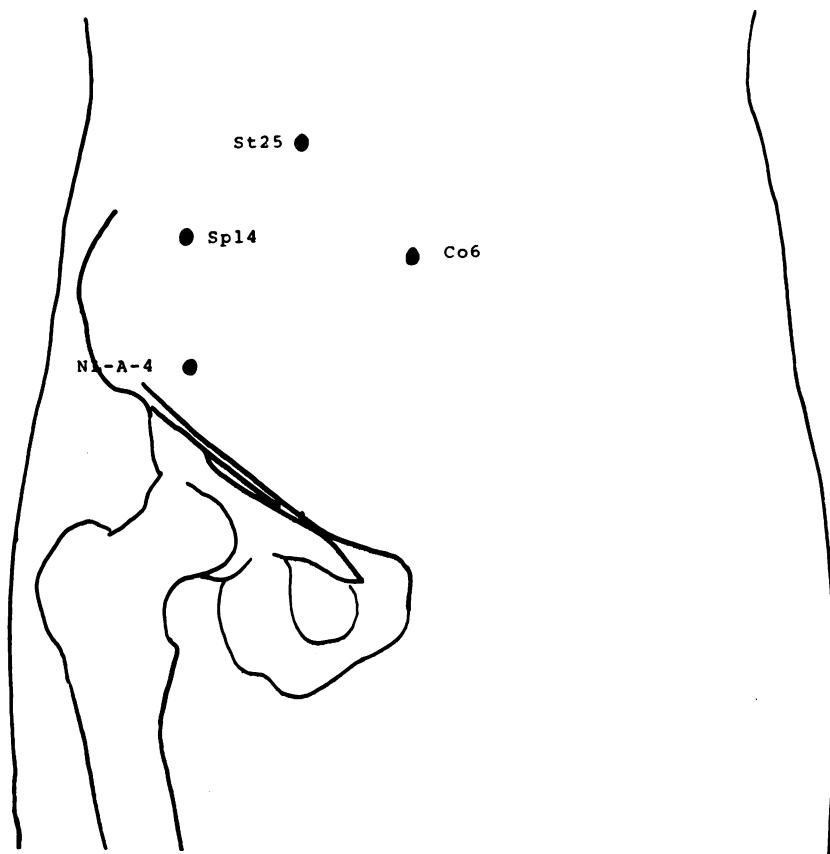


Fig. 1. Inguinal herniorrhaphy, abdominal loci. Reproduced by permission from Leung, S. J., Fan, C. F., and Sechzer, P. H.: Acupuncture therapeutics. *Anesth. Analg.* (Cleveland) 53:942, 1974.

Stomach 25	<i>T'ien Shu</i>	Celestial pivot
Stomach 36	<i>Tsu-San-Li</i>	Walking three miles
Spleen 6	<i>San-Yin-Chiao</i>	Crossroad of three yins
Conception 6	<i>Chi'i-Hai</i>	Vapor sea
Spleen 14	<i>Fu-Chieh</i>	Knot in belly ^{2, 3}

The skin was cleansed with alcohol. After the insertion of the needles and the beginning of electrical stimulation the patients felt some soreness, numbness, and heaviness. About 30 minutes later, analgesia in the lower abdominal quadrant was confirmed and incision was made. Electrical stimulation was continued throughout the operation.⁴ Minimal volumes (1 to 2 ml.) of supplemental 1% lidocaine were used

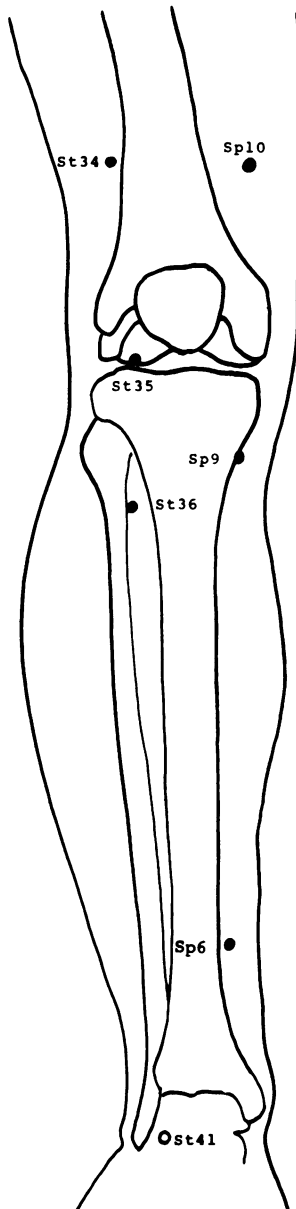


Fig. 2. Inguinal herniorrhaphy, lower extremity loci. Reproduced by permission from Leung, S. J., Fan, C. F., and Sechzer, P. H.: Acupuncture therapeutics. *Anesth. Analg.* (Cleveland) 53:942, 1974.

TABLE I. ACUPUNCTURE STATISTICS
PAIN THERAPY CENTER, MAIMONIDES MEDICAL CENTER
January 1974 to June 1974

Class	Patients	Male	Female	Treat- ments	Com- plete	Improvement		
						Partial	No change	Worse
Arthritis	109	25	84	678	4	77	27	1
Neurology	44	14	30	229	0	23	21	0
Orthopedic	43	20	23	210	6	30	7	0
Miscellaneous	15	4	11	70	2	3	10	0
Nerve deafness	12	5	7	84	0	0	12	0
Total	223	68	155	1,271	12	133	77	1

TABLE II. ACUUNCTURE STATISTICS FOR ARTHRITIS
PAIN THERAPY CENTER, MAIMONIDES MEDICAL CENTER
January 1974 to June 1974

Class	Patients	Male	Female	Treat- ments	Com- plete	Improvement		
						Partial	No change	Worse
Osteoarthritis	54	14	40	347	1	34	18	1
Rheumatoid	13	2	11	83	0	12	1	0
Miscellaneous	42	9	33	248	3	31	8	0
Total	109	25	84	678	4	77	27	1

as needed. Acupuncture anesthesia was used in three inguinal herni-orrhaphies with satisfactory results.

ACUPUNCTURE IN THE PAIN THERAPY CENTER

A wide variety of conditions have been studied in our exploration of acupuncture therapy. The broad categories are arthritis, neurologic disease, orthopedic disease, nerve deafness, and miscellaneous ailments (Table I). Our experience in 1973 has been published.⁵ In the first six months of 1974 we studied 223 patients and administered 1,271 treatments. Our evaluations were made critically and with reserve and were based on the judgments of the patients, nurses, and physicians.

There were 109 patients with arthritis of all types and 73% had

TABLE III. ACUPUNCTURE STATISTICS FOR NEUROLOGY
PAIN THERAPY CENTER, MAIMONIDES MEDICAL CENTER

January 1974 to June 1974

<i>Class</i>	<i>Patients</i>	<i>Male</i>	<i>Female</i>	<i>Treat- ments</i>	<i>Com- plete</i>	<i>Improvement</i>		
						<i>Partial</i>	<i>No change</i>	<i>Worse</i>
Neuralgia, neuropathy	20	8	12	91	0	12	8	0
Trigeminal neuralgia	8	0	8	43	0	4	4	0
Multiple sclerosis	2	1	1	10	0	2	0	0
After cardiovascular accident	3	1	2	13	0	1	2	0
After herpes zoster	3	2	1	13	0	1	2	0
Arachnoiditis	1	1	0	3	0	1	0	0
Convulsive seizure	1	0	1	6	0	0	1	0
Muscular dystrophy	1	0	1	8	0	0	1	0
Muscular atrophy	1	0	1	5	0	0	1	0
Dyskenesis	1	0	1	10	0	1	0	0
Bulbar lateral sclerosis	1	1	0	15	0	0	1	0
Amyotrophic lateral sclerosis	1	0	1	6	0	0	1	0
Head tremors	1	0	1	6	0	1	0	0
Total	44	14	30	229	0	23	21	0

either partial or complete improvement—osteoarthritis 63%, rheumatoid arthritis 92%, and miscellaneous forms 80% (Table II).

The neurologic group included neuralgia, neuropathy, trigeminal neuralgia, and miscellaneous (Table III). There were 44 neurological patients; 52% had either partial or complete relief (neuralgia and neuropathy 60%).

The next large group consisted of orthopedic diseases: disc disease, sciatica, backache, and soft-tissue aches and pains. Of 43 patients in this group, 82% had partial or complete relief (disc, 85%; soft tissue, 75%; sciatica, 77%; low back, 91%) (Table IV).

The miscellaneous group consisted of 15 patients, including sufferers from tinnitus, carcinoma, and asthma. Partial or complete relief was obtained by 33% (Table V). There were 12 patients in our sensorineural deafness group, of which 17% (4) subjectively reported

TABLE IV. ACUPUNCTURE FOR ORTHOPEDICS
PAIN THERAPY CENTER, MAIMONIDES MEDICAL CENTER
January 1974 to June 1974

<i>Class</i>	<i>Patients</i>	<i>Male</i>	<i>Female</i>	<i>Treat- ments</i>	<i>Com- plete</i>	<i>Improvement</i>		<i>Worse</i>
						<i>Partial</i>	<i>No change</i>	
Disc disease	7	2	5	35	0	6	1	0
Soft tissue disease	4	1	3	13	0	3	1	0
Sciatica	18	11	7	94	3	11	4	0
Bone disease	2	1	1	17	1	1	0	0
Low back pain	12	5	7	51	2	9	1	0
Total	43	20	23	210	6	30	7	0

TABLE V. ACUPUNCTURE STATISTICS, MISCELLANEOUS
PAIN THERAPY CENTER, MAIMONIDES MEDICAL CENTER
January 1974 to June 1974

<i>Class</i>	<i>Patients</i>	<i>Male</i>	<i>Female</i>	<i>Treat- ments</i>	<i>Com- plete</i>	<i>Improvement</i>		<i>Worse</i>
						<i>Partial</i>	<i>No change</i>	
Carcinoma	3	0	3	13	0	1	2	0
Tinnitus	5	3	2	30	1	0	4	0
Psychiatric	1	1	0	1	0	0	1	0
Asthma	2	0	2	5	0	1	1	0
Spastic colon	1	0	1	8	0	0	1	0
Colitis	1	0	1	6	1	0	0	0
Constipation	1	0	1	1	0	1	0	0
Postoperative adhesions	1	0	1	6	0	0	1	0
Total	15	4	11	70	2	3	10	0

partial improvement (Table I), although audiometric improvement was not found.

DISCUSSION

Since pain is a private phenomenon, evaluation of the efficacy of acupuncture is essentially behavioral. Our attitude toward acupuncture therapy was one of sympathetic skepticism. We depended on reports

from patients as well as observed evidence of affect, rapport, responses, and reactions. Nurses experienced in the study of pain and analgetics made observations and these were collated with the judgment of the physicians.

Only five patients were relieved of pain completely. In presenting the numbers and percentages of patients apparently helped, we have combined two ratings, partial and complete improvement, to reflect a more complete view of the results of treatment.

The most encouraging results were obtained in the orthopedic (82%) and arthritis groups (73%). These values were considerably higher than those expected from placebos. In sensorineural deafness the results were essentially negative; acupuncture has been discontinued in this group. The results obtained in the early part of 1974 are consistent with those we reported for 1973.

Although we have judged our results with the three inguinal herniorrhaphies as satisfactory, we have not continued the study of acupuncture anesthesia, since it is demanding, time-consuming, and capricious. It is not 100% effective.

SUMMARY

Methods, equipment, and results of the experimental use of acupuncture as a therapeutic modality at the Maimonides Medical Center have been presented. Three patients received acupuncture anesthesia for inguinal herniorrhaphy with satisfactory results. A total of 223 patients were treated (1,271 sessions) in the first six months of 1974 at the Pain Therapy Center. Although few patients (5%) obtained complete relief, partial or complete improvement were obtained as follows: orthopedic disease, 82%; arthritis, 73%; neurologic diseases, 52%; and miscellaneous, 33%.

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